

Association for Information Systems

**AIS Electronic Library (AISeL)**

---

Proceedings of the 2020 AIS SIGED  
International Conference on Information  
Systems Education and Research

SIGED: IAIM Conference

---

12-21-2020

## ONLINE LEARNING FRAMEWORK - RAPID FRAMEWORK DEVELOPMENT AS A RESPONSE TO THE COVID-19 PANDEMIC

Bill Au

*RMIT University Vietnam, [bill.au@rmit.edu.vn](mailto:bill.au@rmit.edu.vn)*

Clara Nkhoma

*RMIT University Vietnam, [clara.nkhoma@rmit.edu.vn](mailto:clara.nkhoma@rmit.edu.vn)*

Mathews Nkhoma

*RMIT University Vietnam, [mathews.nkhoma@rmit.edu.vn](mailto:mathews.nkhoma@rmit.edu.vn)*

Follow this and additional works at: <https://aisel.aisnet.org/siged2020>

---

### Recommended Citation

Au, Bill; Nkhoma, Clara; and Nkhoma, Mathews, "ONLINE LEARNING FRAMEWORK - RAPID FRAMEWORK DEVELOPMENT AS A RESPONSE TO THE COVID-19 PANDEMIC" (2020). *Proceedings of the 2020 AIS SIGED International Conference on Information Systems Education and Research*. 30.  
<https://aisel.aisnet.org/siged2020/30>

This material is brought to you by the SIGED: IAIM Conference at AIS Electronic Library (AISeL). It has been accepted for inclusion in Proceedings of the 2020 AIS SIGED International Conference on Information Systems Education and Research by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

## ONLINE LEARNING FRAMEWORK - RAPID FRAMEWORK DEVELOPMENT AS A RESPONSE TO THE COVID-19 PANDEMIC

Bill Au  
RMIT University Vietnam  
bill.au@rmit.edu.vn

Clara Nkhoma  
RMIT University Vietnam  
clara.nkhoma@rmit.edu.vn

Mathews Nkhoma  
RMIT University Vietnam  
Mathews.nkhoma@rmit.edu.vn

### Abstract:

The Covid-19 pandemic has had an enormous impact on the world, with the education sector seeing considerable disruption. The practice of social distancing and mandatory lockdowns resulted in the near total closure of schools and universities in many countries across the globe. This led to the need for many institutions to conduct their classes online. There are many examples of how universities transitioned to online teaching during the pandemic, however, this paper will contribute to the body of knowledge by sharing the experiences of academic staff in an international offshore campus in South East Asia. Based on experience, the challenges and benefits of online education are discussed from the perspectives of students, parents and lecturers. Furthermore, the paper elucidates the use of an online framework to provide institution-wide support, enhance the benefits of online learning and mitigate its pitfalls. Reflections from lecturers offer insights running an online class with this framework. The authors recommend the use of an institution wide framework and support to facilitate a smooth transition to online classes and promote long-term sustainability of online learning. Authentic assessments also play a pivotal role in online learning.

**Keywords:** Covid-19, online education, education disruption, virtual learning, higher education, digital learning

## I. INTRODUCTION

Online education has become a reality for many students in higher education [Borup, West and Graham, 2012] and this is certainly the case recently after the global pandemic led to disruption of face-to-face delivery worldwide. Most institutions were forced to transition to online learning with little to no warning and limited resources which posed a number of challenges.

This paper reflects on the steps taken by an off-shore international university in South East Asia to support its staff and students in order to ensure continuity when face-to-face classes were disrupted.

To continue delivering classes and education amid government mandated closures and social distancing, the university moved swiftly to develop an online learning framework to adapt class material for online consumption. During the process, several key challenges were faced in not only equipping academic staff to develop online material but to ensure a level of consistency, quality and participation among all teaching staff. The development of the online framework looked to satisfy fundamental learning criteria as an agile response to the pandemic and not an extensive online experience with all the bells and whistles.

In addition, students and parents expressed their concern of moving to online delivery, many citing quality, lack of interaction and technical issues as areas of concern. Dispelling these concerns would involve the use of information sessions via live streams, informational videos and information campaigns to increase awareness, educate and set expectations with students and parents regarding online learning, the university's framework and support available during delivery.

Sandars et al. [2020] proposed twelve recommendations for swiftly transitioning to online learning. Some of these tips yielded positive results, for example:

- managing the change process
- using the current Learning Management System (LMS)
- making the best of online lectures
- the use of online videos.

As suggested by Sandars, et al. [2020], when transitioning to online education, managing lecturers and students is one of the most difficult and crucial aspects. Moreover, the outcomes of online education were, for the most part, dependent on the lecturers' online teaching capabilities and experience [Zhang et al. 2020]. Consequently, the university took necessary measures to equip the academic staff with the requisite knowledge and skills for online teaching, while multiple communication channels were made available for students to inform them of what to expect during online learning.

Academic staff were supported with various workshops to up-skill and acquire new capabilities in order to develop course material. In addition to the development and roll-out of the framework, a layer of governance was added to ensure compliance, quality assurance and consistency. A response team was formed to support all staff in online learning pedagogy, multimedia development and technical issues.

While the university being able to continue operating was a big win, student and staff feedback has indicated that there is growing confidence in teaching and learning online among staff and students, an increase in awareness and capability in online tool utilization and more importantly a paradigm shift in what education could look like moving forward.

First, the paper will provide a profile overview of the staff and students and discuss the challenges and benefits of online education from the perspectives of students, parents and lecturers. This will be followed by a discussion on the online teaching framework developed to support staff during the transition. Reflections from academic staff are included to share their experience with those who might want to transition or improve their current practice.

## **II. VIETNAM STAFF AND STUDENT PROFILES**

### **UNDERGRAD. STUDENTS**

Majority consist of high achievers from affluent families in Ho Chi Minh or Hanoi. They are interspersed with scholarship students and only few supporting themselves. The majority are aged between 18-23.

### **POSTGRAD.(MBA/MIB)**

Consist of high achievers with either in-country or overseas Bachelors, many are from junior manager positions but majority from affluent families (with own businesses) in Ho Chi Minh or Hanoi. They are interspersed with a smaller number of scholarship students and only few supporting themselves. The majority are aged between 21-26.

### **POSTGRAD GLOBAL TRADE STUDENTS**

Tend to be graduates and many postgraduates who work in areas of global trade at senior or levels that provide impact in markets. The cohorts are a mix of international participants in the programs, from the Asia-Pacific regions, many are at CEO/MD level. Majority are aged between 27-34.

## PHD STUDENTS

60-70% are Scholarship students with the majority of those being academics from Vietnamese universities (many topics revolve around education, learning and Economics/Finance. Of those non-scholarship students many are studying in areas of Tourism, Fintech, or Entrepreneurship. As with Global trade students many are aged between 27-34 and 75% are Female.

## FULL TIME ACADEMICS

At Lecturer level to have at least 5-years' work experience in (for a university) preferably with a PhD and industry or work experience, at Associate Lecture level PhD is not been mandatory, but we are shifting to recruit to ECRs awaiting PhD results rather than to substantive posts as academics. For Senior Lecturers, the requirements are research profiles with accrued outputs in a specific field related to the advertised post with evidence of publication at A/A\*, industry/business experience and PhD supervision.

## III. CHALLENGES AND BENEFITS OF ONLINE EDUCATION

As it became clear that the closure of campuses was imminent, the university endured to continue operations in order to minimize disruption to student academic progression. The response was to develop an online learning framework which would see the agile development of course content to be delivered online while minimizing the impact to overall quality and the student experience.

### THE STUDENT AND PARENT PERSPECTIVE

As it became clear that the closure of campuses was imminent, the university endured to continue operations in order to minimize disruption to student academic progression. The response was to develop an online learning framework which would see the agile development of course content to be

#### Challenges

Students faced a variety of challenges during the period of online only teaching, listed below are a summary of common obstacles faced as reported from academic staff.

##### *Lack of experience studying in an online environment*

One of the major concerns raised from students and parents stemmed from the lack of awareness around online education. Students also expressed a concern that they did not now 'how' to study online, which came from a lack of understanding of what would be the online learning framework. These challenges were addressed by developing and rolling out an education initiative which was aimed at increasing awareness around online learning and educating students and parents on the university's online learning framework, which will be discussed later.

##### *Internet connection*

The sudden spread of Covid-19 and the subsequent lockdown response from the government in mid-March, left many students suddenly isolated wherever they happened to be. While the major cities in mostly enjoy good internet infrastructure, the same could not be said for the smaller provinces. This created an understandable concern from students who were contemplating learning online. Students who experienced connection issues were able to download recordings on the synchronous online classes for viewing.

##### *Decrease in interaction and collaboration*

Of major concern for students and parents is the assumption that interaction will be reduced, the removal of a physical classroom where a lecturer and students discuss concepts, implies diminished guidance and reduced mechanisms for validation and consolidation of

understanding. This view is echoed by Borup et al. [2011] who stated that the nature of online learning restricted the kinds and quality of interaction students had with their lecturers and fellow students. To alleviate these concerns, it was important once again to educate students and parents not only on the online learning framework, but also the tools and platforms utilized which underpin it.

#### *Distractions when teaching or studying at home*

Zhang et al. [2020], mentioned that teaching and studying at home posed challenges for young teachers who may be distracted by childcare. Furthermore, it may not always be easy for students and teachers to find conducive environments for teaching and studying.

### **Benefits**

While the challenges proved to be formidable hurdles, once overcome and students had acclimatized to their new learning environment, it should be noted that students provided positive feedback on the benefits of online learning.

#### *Convenience*

Students appreciated the convenience afforded with online learning, being able to attend online classes, consume materials, review at their own pace and convenience using multiple devices was very well received by students, many of which have cited as a major benefit. According to Borup et al. [2011], online education offers lecturers and student flexibility and access that is not available in face-to-face learning.

#### *Increase in participation*

Students also reported being more likely to engage in class, participating in conversations, asking questions or attempting to answer questions. The format of online classes provides a layer of anonymity, where students could interact using voice or chat functionality. This provided a channel for students who are usually shy or withdrawn to participate without the fear of drawing attention [Borup et al. 2011].

#### *Increased support*

The nature of online learning saw students and lecturers adopt tools which traditionally would be underutilized. Microsoft Teams became a heavily used tool for students to gain support from their lecturers and other students. This resulted in students having direct access to lecturers, increasing support.

## **THE STUDENT AND PARENT PERSPECTIVE**

One of the major hurdles the university faced was a significant increase of student's applying for leave of absence. The general consensus from students was their uncertainty in what to expect from learning in an online environment. The majority of students had little to no experience with studying online and as a result a number of challenges needed to be addressed to change the perception of online learning.

### **Challenges**

Students faced a variety of challenges during the period of online only teaching, listed below are a summary of common obstacles faced as reported from academic staff.

#### *Lack of experience studying in an online environment*

One of the major concerns raised from students and parents stemmed from the lack of awareness around online education. Students also expressed a concern that they did not know 'how' to study online, which came from a lack of understanding of what would be the online learning framework. These challenges were addressed by developing and rolling out an education initiative which was aimed at increasing awareness around online learning and educating students and parents on the university's online learning framework, which will be discussed later.

### *Internet connection*

The sudden spread of Covid-19 and the subsequent lockdown response from the government in mid-March, left many students suddenly isolated wherever they happened to be. While the major cities in mostly enjoy good internet infrastructure, the same could not be said for the smaller provinces. This created an understandable concern from students who were contemplating learning online. Students who experienced connection issues were able to download recordings on the synchronous online classes for viewing.

### *Decrease in interaction and collaboration*

Of major concern for students and parents is the assumption that interaction will be reduced, the removal of a physical classroom where a lecturer and students discuss concepts, implies diminished guidance and reduced mechanisms for validation and consolidation of understanding. This view is echoed by Borup et al. [2011] who stated that the nature of online learning restricted the kinds and quality of interaction students had with their lecturers and fellow students. To alleviate these concerns, it was important once again to educate students and parents not only on the online learning framework, but also the tools and platforms utilized which underpin it.

### *Distractions when teaching or studying at home*

Zhang et al. [2020], mentioned that teaching and studying at home posed challenges for young teachers who may be distracted by childcare. Furthermore, it may not always be easy for students and teachers to find conducive environments for teaching and studying.

## **Benefits**

While the challenges proved to be formidable hurdles, once overcome and students had acclimatized to their new learning environment, it should be noted that students provided positive feedback on the benefits of online learning.

### *Convenience*

Students appreciated the convenience afforded with online learning, being able to attend online classes, consume materials, review at their own pace and convenience using multiple devices was very well received by students, many of which have cited as a major benefit. According to Borup et al. [2011], online education offers lecturers and student flexibility and access that is not available in face-to-face learning.

### *Increase in participation*

Students also reported being more likely to engage in class, participating in conversations, asking questions or attempting to answer questions. The format of online classes provides a layer of anonymity, where students could interact using voice or chat functionality. This provided a channel for students who are usually shy or withdrawn to participate without the fear of drawing attention [Borup et al. 2011].

### *Increased support*

The nature of online learning saw students and lecturers adopt tools which traditionally would be underutilized. Microsoft Teams became a heavily used tool for students to gain support from their lecturers and other students. This resulted in students having direct access to lecturers, increasing support.

## **LECTURER'S PERSPECTIVE**

### **Challenges**

Responding to the Covid-19 pandemic on short notice provided the university with a number of challenges, planning and executing a rapid response at scale would prove difficult due to a number of constraints such as lead time, resources and current capability.

*Lack of online delivery experience*

The majority of staff did not come from backgrounds of online education and most had little to no experience in this form of delivery. In order to overcome this challenge, the online learning framework was developed as a baseline which all lecturers could utilize to develop their online courses. This was provided through a series of workshops and resources to uplift capability, while an agile support team was put together to provide ad-hoc assistance to staff.

*Resources*

With a rapid response required, the development of the online learning framework faced a challenge in the actual implementation. Due to the short lead time provided and human resources available, lecturers were left having to juggle development of content on a week by week basis. The short turn-around added further difficulty as lecturers had to both up-skill and develop online course content which increased staff workload considerably, to help counter this, the university deprioritized other objectives to increase bandwidth for development of the online learning framework.

**Benefits**

Though the transition to online only was difficult and placed a lot of pressure on staff to develop material, the process did yield long term benefits in the form of new capability and confidence delivering in the online space.

*Uplift in knowledge and capability*

Staff have provided positive feedback on the online experience, most notably the benefit and confidence gained by staff in being able to develop and deliver online classes. As an organization, there has been a capability uplift and an increase in the use of technology in not only teaching but in ancillary activities such as running remote meetings, document collaboration and running live stream events as a form of organizational communication.

*Innovation and increase in blended approach to education*

Many of the materials developed during the pandemic, such as the narrated slides and videos have been retained and integrated into the new normal for classes. Some courses, combine features of face to face and online elements, others now provide the flexibility for students to study face to face or completely online. In many ways, the Covid-19 pandemic forced innovation which will continue to yield benefits moving forward.

#### IV. INSTITUTIONAL STRATEGY AND SUPPORT - ONLINE LEARNING FRAMEWORK

The RMIT online learning framework was developed, with strict time and resource constraints, to replicate an in-class learning experience. Students engaged with the following components:



Figure 1. RMIT Online Learning Framework

##### *Narrated lectures*

Adapting the lecture for online delivery, lecturers went through each slide and recorded audio narration, allowing students to consume the lecture much like they would in the classroom with the added benefit of students being able to go at their own pace and replay the lecture on demand. When clarification was required, students were able to pause the video and add comments or question to the timestamp in the video itself.

##### *Synchronous Online Class*

The lack of real time interaction was one of the main concerns raised by students and parents. To address this, in addition to the narrated lecture, lecturers ran synchronous online classes which provided students with a means to have real time interaction for lectures, reviewing content, interact with lecturers and classmates, participate in discussions and take on group activities. Using features designed to mimic a physical classroom, students could raise hands to ask questions, chat to other students, present to the class, interact with polls and quizzes and even break out into smaller groups to work together before converging back into a class to discuss.



*Online activities*

To help increase engagement with students, activities and tasks were developed which were designed to reinforce and validate what students learned through the narrated lectures and online classes. These activities varied in nature and included, case studies, quizzes, group-based problem-solving activities and presentations.

*Discussions Forums*

To recreate group level discourse, forums were leveraged as a place for discussion, debate and ideation. Lecturers leveraged this to regularly pose questions which required group discussion to resolve.

*Online Consultation*

Understanding that students would require increased support, lecturers made available a variety of channels in which they could be engaged by students. In addition to the conventional channels such as email, one-on-one consultations were made available using Microsoft Teams.

*Authentic assessments*

During the pandemic, RMIT continued to engage with industry representatives to ensure our assessments remained authentic and align with industry needs. Students experienced little to no impact regarding how assessments were designed and undertaken.

*Continuous Feedback*

Continuous feedback was critical for students to understand where they stood in terms of their progress and how they could improve. Students received feedback from their lecturers in different forms, from Individual and group feedback based on assessment work, instant feedback provided by quizzes and class feedback derived from class performance in activities and case studies.

## V. DISCUSSION

### *Staff Reflection*

While the pandemic forcing the university to transition to online learning certainly was no easy feat to accomplish, the fruits of the labor far outweighed the challenges. Upon reflecting on the delivery and focusing on key elements which contributed to a positive online learning experience some key takeaways are listed below:

“In order to instill confidence in students, creating a strong sense of teacher presence and community in addition to the online components listed above was critical. I utilized proven theory in the Community of Inquiry to establish the sense of presence and community, with persistence and consistency and driven by the desire to support our students as much as possible during the difficult period, this delivered positive results”.

Setting expectations proved important when teaching those who have not learned in an online environment before. By not setting expectations with students from the onset, the likelihood of issues arising would increase, ranging from poor online etiquette to more serious quandaries such as plagiarism or online harassment. Thus, it was important to lay down ground rules to inform students and set the expectation on how students should conduct themselves, interact and engage with the course in terms of consuming content and time and effort required.

It is typical for a course to see large participation numbers which start to taper off as time marches on. A major challenge is keeping students engaged and participating consistently throughout. The key in driving this is planning and ensuring social, cognitive and teacher presence, the three pillars of the Community of Inquiry [Swan et al. 2009].

- Establishing social presence was done by integrating peer feedback through the use of discussion board activities, break-out groups discussions and group activities which allowed students to identify with those within their learning community, communicate openly, project individual personalities and develop interpersonal relationships.
- Cognitive presence was supported through regular communication, discourse and feedback mechanisms
- Establishing teacher presence supported maintaining motivation and participation levels. Planning ahead and preparing a content roadmap which includes activities, questions, media and announcements coupled with the online lectures and drop-in sessions allowed lecturers to passively ensure students are consistently engaged.

“In order to increase interaction during the synchronous sessions, I would usually start off by giving them a quiz to review the previous weeks content. I was still able to use Kahoot! by sharing my screen with the students and the students enjoyed this.

“I communicated with my students by creating short videos to reinforce messages that I was sending by email. These videos were usually two to three minutes long and were reminding students about what would be covered in the next sessions and a quick wrap-up of what had already been done. Earlier studies have found that asynchronous videos are effective tools in establishing social presence [Borup et al., 2011, Griffiths and Graham, 2009a, Griffiths and Graham, 2010] and this was the motivation behind these video messages”.

Although students had the option to answer and ask questions verbally or using the chat function, most students preferred using the chat functions for interaction with their peers and the lecturer. This led to more participation and engagement during synchronous online classes as more students were willing to contribute behind the keyboard rather than in face-to-face settings as those students who may not feel comfortable to contribute in face-to-face settings were more willing to do so.

There were video instructions for each piece of assessment followed by a discussion board so students could ask questions about the assignment and check frequently asked questions before posting their answers. This meant the students felt supported and were able to see that there were others who were in similar situation as themselves.

Courses had already transitioned to authentic assessment two years before the pandemic, therefore, going online did not have a big impact on assessment practices. A minor adjustment had to be made to one of the assessment tasks: part of the assessment required students to have face-to-face discussions in class. These discussions were done entirely online using a discussion forum in the learning management system.

The transition to online teaching was smooth, with all factors considered, there was a lot of support from Learning and Teaching unit. Preparing materials for online teaching was time consuming, but the experience was rewarding.

## VI. CONCLUSION

Elements of online education is bound to be the 'new-normal' for a lot of institutions world-wide. Ensuring a smooth transition for staff is very important. Institutional support plays a significant role in making sure there is a successful move to online teaching and learning.

There are challenges and benefits associated with online teaching: it is important to make sure there are measures in place to mitigate and minimize the challenges and enough resources are allocated to the teaching staff to enable them to run the system effectively.

Understanding students' and parents' perceptions of online teaching and learning is critical in designing the right communication methods to educate and set expectations. This information may also be crucial in designing the curriculum itself.

Authentic assessments play a big role in the transition to online learning. Having no final examinations meant that all courses were ready to be assessed online and in cases where changes were needed, these were minor.

## VII. REFERENCES

Borup, J. West, R. E., & Graham, C. R. [2012], 'Improving online social presence through asynchronous video', *The Internet and higher Education*, Vol. 15, Issue 3, pp195-203 <https://doi.org/10.1016/j.iheduc.2011.11.001>

Borup, J., Graham, C.R. & Velasquez, A., [2011]. 'The use of asynchronous video communication to improve instructor immediacy and social presence in a blended learning environment'. In *Blended learning across disciplines: Models for implementation* (pp. 38-57). IGI Global.

Basilaia, G., & Kvavadze, D. [2020]. Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, 5(4), em0060. <https://doi.org/10.29333/pr/7937>

Griffiths, M. & Graham, C. [2010]. Using Asynchronous Video to Achieve Instructor Immediacy and Closeness in Online Classes: Experiences from Three Cases. *International Journal on E-Learning*, 9(3), 325-340. Waynesville, NC USA: Association for the Advancement of Computing in Education (AACE). Retrieved October 2, 2020 from <https://www.learntechlib.org/primary/p/30315/>.

Griffiths M. E. & Graham, C. R. [2009a], 'Using Asynchronous Video in Online Classes: Results From a Pilot Study', *International Journal of Instructional Technology and Distance Learning*, Vol. 6, No 3, pp. 65 -76

Sandars J, Correia R, Dankbaar M, de Jong P, et al. 2020, 'Twelve tips for rapidly migrating to online learning during the COVID-19 pandemic', *MedEdPublish*, 9, [1], 82, <https://doi.org/10.15694/mep.2020.000082.1>

Swan, K., Garrison, D.R. and Richardson, J.C., 2009. A constructivist approach to online learning: The community of inquiry framework. In Information technology and constructivism in higher education: Progressive learning frameworks (pp. 43-57). IGI global.

Zhang, W., Wang, Y., Yang, L. & Wang, C., [2020], ' Suspending Classes Without Stopping Learning: China's Education Emergency Management Policy in the COVID -19 Outbreak', Journal of risk and Financial Management, 13, 55, p.1-6 doi:10.3390/jrfm13030055

## VII. ABOUT THE AUTHOR(S)

**Bill Au** is a lecturer and course coordinator at the University of RMIT Vietnam. He specializes in business information systems and logistics and has published in the areas of social media and technology application in education. During the Covid-19 pandemic Bill was instrumental in supporting the university in the development and rollout of the online learning framework.

**Clara Nkhoma** is a Lecturer and course coordinator in accounting at RMIT University Vietnam. Her research interests include student engagement, accountability, and ethics education.

Professor **Mathews Nkhoma** is the Dean of School of Business & Management (SBM), his primary responsibilities are to ensure a consistently high-quality, transformative experience for all SBM students, staff members and industry partners, and to continue the School's positive impact on Vietnam and the Southeast Asia region.